



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,108	09/10/2004	Youichi Sakakibara	OIP.026	4176

20987 7590 11/30/2005

VOLENTINE FRANCO, & WHITT PLLC
ONE FREEDOM SQUARE
11951 FREEDOM DRIVE SUITE 1260
RESTON, VA 20190

EXAMINER

KIM, ELLEN E

ART UNIT PAPER NUMBER

2874

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

EX

Office Action Summary	Application No.	Applicant(s)	
	10/507,108	SAKAKIBARA ET AL.	
	Examiner	Art Unit	
	Ellen Kim	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, and 4-7 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Andrieux et al [USPAT 6,384,960].

In re claim 1, Andrieux et al disclose an optical transmission medium 9 that comprises, in a nonlinear optical transmission medium 8, carbon nanotubes [column 3, lines 55-60] having an optical nonlinear characteristic [column 4, lines 25-28] are introduced.

In re claims 4, , Andrieux et al does not specifically teach the melting point of the optical transmission medium. Andrieux et al however show all the claimed structural limitation, therefore the claimed melting point is inherently shown by Andrieux et al's optical transmission medium.

In re claims 5 and 6, Andrieux et al does not specifically teach that the optical transmission medium is an optical fuse and is a dispersion compensating element.

Andrieux et al however show all the claimed structural limitation, therefore the Andrieux et al's optical transmission medium is considered to function inherently as an optical fuse and function as a dispersion compensating element.

In re claim 7, Andrieux et al does not specifically teach that the optical transmission medium is soluble in organic solvents. Andrieux et al however show all the claimed structural limitation, therefore Andrieux et al's optical transmission medium is considered to be inherently soluble in organic solvents.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2, 3, and 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Andrieux et al.

In re claim 2, Andrieux et al disclose every aspect of claimed invention except for the single-mode optical fiber.

Official Notice is taken that a single mode optical fiber for transmitting optical light signal is old and well known in the art. See *In Re Malcolm* 1942 C.D. 589:543 O.G. 440 MPEP 706.02 (a).

Therefore, it would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify Andrieux et al's device to include the single mode optical fiber for the optical transmission medium because the single mode optical fiber is extremely well known in the art and easily accessible with reasonable cost.

In re claim 3, Andrieux et al disclose every aspect of claimed invention except for the bismuth oxide material.

It would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify to include the bismuth oxide material, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

In re claims 8 and 9 , Andrieux et al does not specifically teach the melting point of the optical transmission medium. Andrieux et al however show all the claimed structural limitation, therefore the claimed melting point is inherently shown by Andrieux et al's optical transmission medium.

In re claims 10-13, Andrieux et al does not specifically teach that the optical transmission medium is an optical fuse and is a dispersion compensating element. Andrieux et al however show all the claimed structural limitation, therefore the Andrieux et al's optical transmission medium is considered to function inherently as an optical fuse and function as a dispersion compensating element.

In re claims 14 and 15, Andrieux et al does not specifically teach that the optical transmission medium is soluble in organic solvents. Andrieux et al however show all the claimed structural limitation, therefore Andrieux et al's optical transmission medium is considered to be inherently soluble in organic solvents.

Conclusion

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

For all official patent application related correspondence for organizations reporting to the Commissioner of Patents:

- Correspondence that is transmitted by facsimile must be directed to the central facsimile number, (703) 872-9306.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Further references of interest are cited on Form PLO-892, which is attachment to this office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen Kim whose telephone number is (571) 272-2349. The examiner can normally be reached on Monday through Thursday.

Ellen E. Kim
Primary Examiner
November 23, 2005/EK

A handwritten signature in black ink, appearing to read "Ellen Kim", is written over the typed name and title.